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managed by Brookhaven Science Associates
for the U.S. Department of Energy

Mr. Brian Jankauskas
New York State Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway – 12th Floor
New York, New York 12233-7051

February 4, 2022

Ms. Sharon Hartzell
Federal Facilities Section
U.S. EPA – Region II
290 Broadway – 18th Floor
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Hartzell:

**SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) INTERAGENCY
AGREEMENT (IAG) – MONTHLY REPORT FOR JANUARY 2022**

In accordance with the Interagency Agreement (IAG) for Brookhaven National Laboratory (BNL), enclosed is the Monthly Report for January 2022 covering the Long-term Stewardship (LTS) areas listed below:

- Brookhaven Graphite Research Reactor (BGRR) Surveillance and Maintenance
- High Flux Beam Reactor (HFBR), including the Waste Loading Area (WLA) Surveillance and Maintenance
- Soil and Water Remediation

If you have any questions, please call Gerald Granzen at (631) 344-4089.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Dorsch", written over a horizontal line.

William Dorsch, Manager
Groundwater Protection Group

Enclosure, as stated:

P. Armani, NYSDEC	K. Eng, BHSO
C. Costello, NYSDOH	F. Fernandez, BHSO
D. O'Hehir, NYSDOH	R. Gordon, BHSO
S. Rushford, NYSDOH	G. Granzen, BHSO
A. Rapijko, SCDHS	C. Kwok, BHSO
J. Wanlass, SCDHS	G. Olson, BHSO
M. Soucie, NYSDOH	C. Polanish, BHSO
D. Pocze, EPA	J. Remien, BSA
	S. Coleman, BSA
	R. Howe, BSA
	D. Paquette, BSA
	V. Racaniello, BSA
	A. Engel, BSA
	File: GWER 17.1.22

**Brookhaven National Laboratory
Interagency Agreement (IAG) Monthly Report
January 2022
Long Term Stewardship (LTS) Activities**

**BROOKHAVEN GRAPHITE RESEARCH REACTOR (BGRR) SURVEILLANCE AND
MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- Conducted routine surveillance and maintenance (S&M) activities.
- Work continued on the installation of the Quantum Network experiment on the BGRR roof.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- None.

Planned Actions for the Next 90 Days

- The next quarterly inspection of the former offices and high bay is scheduled for 2/17/22.

**HIGH FLUX BEAM REACTOR (HFBR) INCLUDING, STACK, GROUNDS, AND WASTE
LOADING AREA (WLA) SURVEILLANCE AND MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- BSA and BHSO participated in the weekly stack demolition coordination teleconferences among the contractor, the Army Corps of Engineers (USACE) and DOE's Office of Environmental Management (EM).

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- The three tanks that still have solid material with trapped residual liquid and the super sacks generated from the stack exterior coating abatement are ready for pick-up by the transporter.

Planned Actions for the Next 90 Days

- Continue S&M activities.
- Regulatory comments on the draft Stack Closeout Report were due 1/17/22.
- The remaining waste material generated from the stack exterior coating abatement will be picked-up by the transporter 2/2/22 for shipment via truck to Waste Control Specialists, LLC in Texas.
- The next quarterly inspection of the confinement dome and outside areas is scheduled for 2/24/22.

SOIL AND WATER REMEDIATION

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements:

- The monthly IAG teleconference was held 1/6/22 and included an update on the HFBR stack post-demolition and per- and polyfluoroalkyl substances (PFAS) groundwater characterization and treatment system construction.
- Received NYSDEC approval letter 1/3/22 for the IAG Schedules Document. Emailed responses to comments including the updated Peconic River Fish Surveillance Monitoring Data Quality Objective to NYSDEC/EPA 1/6/22.
- Submitted the SPDES Equivalency Permit renewal request for the Building 96 RTW-1 Treatment System to NYSDEC 1/10/22. Responded to NYSDEC's additional data request 1/13/22.
- Received NYSDEC concurrence letter on the Addendum Five Year Review 1/27/22.
- Preparing updates to the Revised Land Use Controls Management Plan (LUCMP).
- Work continued on the PFAS Time Critical Removal Action (TCRA) groundwater remediation including:
 - The contractor continued field work with the installation of seven of the 11 extraction wells and 56 of the 83 monitoring wells. The extraction wells are all developed. The well driller is setting up to install extraction well FFH-C.
 - Contractor completed most of the piping installation associated with the Current Firehouse remediation system, except for the three extraction wells along Princeton Avenue that are part of a contract alternate option. Piping work for the Former Firehouse system started from extraction well FFH-A and has continued south past Grove Street and was tied into the existing main going to the carbon vessels near Building 598. The communications conduit was run to East Princeton Ave for extraction well FFH-C. The electricians have started work on the communications and electric wiring and connections.
 - Two additional Geoprobe wells were installed (for a total of four) to evaluate vertical distribution of PFAS near monitoring wells 117-01 and 117-02 upgradient of the William Floyd Wellfield. One of the four Geoprobes detected PFOS at a concentration above the 10 ng/L drinking water standards (with a maximum concentration of 13 ng/L). All PFOA concentrations were below 10 ng/L.
 - Continued installation of Geoprobes west of dormitory Building 170 to help identify the source of the "western lobe" of high level PFAS. Data from one of

the temporary wells installed along southern edge of the parking lot detected PFOS and PFOA concentrations up to 5,760 ng/L and 41 ng/L, respectively. An additional six Geoprobes may be installed to verify the source of the PFAS.

- BSA provided an update on PFAS projects to the DOE PFAS Work Group 1/20/22.
- A high-water level alarm in one of the injection wells for the BGRR Sr-90 Groundwater Treatment System caused a system shutdown. The electrician performed repairs and the system was restarted.
- The pump in OU I South Boundary Groundwater Treatment System extraction well EW-1 has failed, and the well driller will pull the pump.
- The flow meter for the Western South Boundary extraction well WSB-1 is not working. The Water Shop repaired the meter, and the well was restarted.
- Carbon change-outs were performed at the Airport and OU VI EDB treatment systems 1/13/21 and 1/18/21, respectively.
- Building 650 Draft Closeout Report is undergoing BSA review.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- The Laboratory continued COVID-Phase 2 operations. The Groundwater Protection Group (GPG) maintained minimal staff working on-site to manage field activities. All other GPG staff continue to work remotely.
- BSA briefed the regulators 1/6/22 regarding the ongoing discussions with AVR Realty on access needed for Industrial Park monitoring wells and treatment system infrastructure.
- BSA/BHSO briefed the Suffolk County Water Authority technical/engineering staff 1/26/22 on groundwater flow and distribution of PFAS in the southwestern portion of the site.

Planned Actions for the Next 90 Days

- The Laboratory and GPG will continue COVID-Phase 2 operations.
- The monthly IAG teleconference is scheduled for 2/3/22 and will include updates on the HFBR stack post-demolition cleanup and PFAS groundwater characterization/remediation system construction.
- Awaiting EPA comments on the draft annual IAG Schedules Update which were due 12/30/21.
- Awaiting EPA concurrence letter on the Addendum Five Year Review.
- Continue installation of extraction wells, piping, communications, electric and monitoring wells for the TCRA PFAS Source Area Groundwater Remediation Systems.
- Submit application for SPDES Equivalency Permit to NYSDEC for the Current and Former Firehouse PFAS Groundwater Treatment Systems.
- Install a fifth temporary well to characterize distribution of PFAS in the southwest portion of the BNL site, east of the William Floyd Wellfield.
- Continue the installation of temporary wells west of Building 170 to verify the source of the “western lobe” of high PFAS concentrations.

- Once characterization near Building 170 has been completed, issue revision to the TCRA Characterization Report based upon new Geoprobe data and editorial comments received from NYSDEC.
- Following waste disposal, submit the Closeout Report for Building 650 demolition to the regulators.
- BNL's Radiological Controls representative to complete the fixed contamination survey on the building foundations at the former Hazardous Waste Management Facility.
- Install a new blower for the Middle Road/South Boundary/Western South Boundary Groundwater Treatment System air stripper.
- The BNL Water and Sanitary Planning Team meeting is scheduled for 2/1/22.
- Submit the annual Land Use and Institutional Controls evaluation and the 2021 Environmental Monitoring Report for the Landfills to the regulators 3/1/22 and 3/15/22, respectively.